WHAT IS CLAIMED IS:

1. A vacuum interrupter comprising:

dielectric encapsulation;

a vacuum chamber molded into the dielectric encapsulation, the vacuum chamber comprising:

a ceramic housing;

an end cap sealing the housing;

a floating shield within the housing; and

an exposed ring integral with the housing and coupled with the floating shield;

a semi-conductive material in contact with the exposed ring and disposed on a portion of the vacuum chamber ceramic housing; and

a voltage screen connected to the end cap, said voltage screen overlapping a portion of the semi-conductive material.

2. The vacuum interrupter of Claim 1 wherein the dielectric encapsulation substantially encapsulates the vacuum interrupter.

3. The vacuum interrupter of Claim 1 wherein the dielectric encapsulation is epoxy or the like.

4. The vacuum interrupter of Claim 1 wherein the voltage screen is comprised of perforated metal sheet.

5. The vacuum interrupter of Claim 1 wherein the voltage screen is comprised of metallic mesh material.

6. The vacuum interrupter of Claim 1 wherein the voltage screen is generally bowl-shaped.

7. The vacuum interrupter of Claim 1 further comprising:

a second end cap;

a second voltage screen overlapping a second portion of the semi-conductive material and connected to the second end cap.

8. The vacuum interrupter of Claim 7 wherein the voltage screens substantially enclose the vacuum chamber.

9. The vacuum interrupter of Claim 7 wherein the voltage screens are mirror images of each other.

10. A system for mitigating electric field distortion inside a shielded encapsulated vacuum interrupter comprising:

a vacuum chamber;

a semi-conductive material applied to an exterior portion of the vacuum chamber disposed within the shielded encapsulation;

a first voltage screen electrically connected to a first end of the vacuum chamber and disposed within the shielded encapsulation for enclosing a first portion of the semi-conductive material; and

a second voltage screen electrically connected to a second end of the vacuum chamber and disposed within the shielded encapsulation for enclosing a second portion of the semi-conductive material.

11. The system of Claim 10 wherein the first and second voltage screens are comprised of perforated metal sheet.

12. The system of Claim 10 wherein the first and second voltage screens are comprised of metallic mesh material.

13. The system of Claim 10 wherein the first and second voltage screens are generally bowl-shaped.

14. The system of Claim 10 wherein the first and second voltage screens are mirror images of each other.

15. The system of Claim 10 wherein the first and second voltage screens substantially enclose the vacuum chamber exterior.

16. A method for mitigating electric field distortion inside a shielded encapsulated vacuum interrupter comprising:

providing a vacuum chamber comprising:

a first conductive endcap;

a second conductive endcap; and

an exposed ring disposed in the exterior of the vacuum chamber;

disposing a first semi-conductive material on the exterior of the vacuum chamber and contacting the exposed ring;

connecting a first voltage screen to the first conductive endcap;

connecting a second voltage screen to the second conductive endcap;

encapsulating the vacuum chamber and voltage screens in molded dielectric material; and

disposing a second semi-conductive material on the exterior of the molded dielectric material.

17. The method of claim 16 wherein the first and second voltage screens are comprised of perforated metal sheet, metallic mesh material, or the like.

18. The method of claim 16 wherein the first and second voltage screens are generally bowl-shaped.

19. The method of claim 16 wherein the first and second voltage screens substantially enclose the vacuum chamber and first semi-conductive material.

20. The method of claim 16 wherein the first and second voltage screens are mirror images of each other.

21. The method of claim 16 wherein the first semi-conductive material and the second semi-conductive material are the same.

22. The method of claim 16 wherein the molded dielectric material is epoxy or the like.